

Valid Through September 30, 1996

Consolidated NMOS Master Transition Work Plan

Version 10

June 1996

Consolidated NMOS Master Transition Work Plan

Version 10

June 1996

This document was developed by the
Consolidated NMOS Operations Transition Team.

This document supersedes Consolidated NMOS Master Transition Work Plan, Versions 1 through 9 and all changes thereto. Please destroy all outdated copies. This document is on line in the Lotus Notes-based Consolidated NMOS Task Management Information System (TMIS) database. It can be accessed by opening the Help Database, selecting the "User Guide" View, and selecting the "NMOS Master Transition Plan" topic.

Preface

This Consolidated NMOS Master Transition Work Plan was developed by the Consolidated NMOS Operations Transition Team and approved by the Consolidated NMOS Program Management Team (PMT).

Changes to this document shall be made by document change notice (DCN). Questions concerning this document shall be addressed to:

Consolidated NMOS Operations Transition Team

c/o William Kelly
Code 510
Goddard Space Flight Center

or

c/o David Wagner
ATSC/NMOS
7515 Mission Drive
Lanham, Maryland 20771

or

c/o Walter Ligon
CSC/NMOS
7700 Hubble Drive
Lanham-Seabrook, MD 20706

Executive Summary

As a result of the National Performance Review and the NASA Zero Base Review conducted in the Spring of 1995, GSFC is reassessing the roles of its civil service employees and its mission operations contractors in providing the services needed to conduct the Government's civilian space exploration program. The intent is to have civil service employees concentrate on core competencies and to have contractors provide routine mission operation services.

The Director of the Mission Operations and Data Systems Directorate, Code 500, and the Director of the Suborbital Projects and Operations Directorate, Code 800, have formed four teams made up of civil service and contractor employees to achieve the goals of these reviews by consolidating the Systems, Engineering, and Analysis Support (SEAS) contract; the Network and Mission Operations Support (NMOS) contract; and the Wallops Range and Sub-orbital/Orbital Operations contract. The result of combining these three contracts will be the Consolidated Network and Mission Operations Support with a single prime contractor and several subcontractors. The names and responsibilities of the four teams are as follows:

- Consolidated NMOS Program Management Team - This team will ensure that the NASA high-level requirements are addressed in the transition and will provide oversight to the phase-in process.
- Consolidated NMOS Operations Transition Team - This team will define the changing roles and responsibilities, working interfaces, and phase-in process between NASA and the contractor team required to establish a performance-based environment. This team will develop a template to document changes at the task/function level for phase-in work packages derived from existing cost centers, task assignments, Statements of Work and Contract Work Breakdown Structures.
- Consolidated NMOS Scope of Work Team - This team will identify all Service Level Agreements (SLAs) and General Support Agreements (GSAs), and will develop three SLAs and a Work Breakdown Structure for the Consolidated NMOS contract. The three SLAs will be: 1) Program Management; 2) Tracking, Data Acquisition, and Communications; and 3) a model of a generic mission to be used as a template for mission SLAs.
- Consolidated NMOS Communications Team - This team will provide training and orientation for the NASA and contractor employees involved in the Consolidated NMOS contract.

This document defines those functions considered to be NASA core competencies and those functions to be performed by the Consolidated NMOS contractor. The plan also addresses contractor-to-contractor consolidation transitions in detail. This document lists the tasks necessary to plan, develop, test, and operate mission operations systems for the civilian space exploration program. For those tasks for which changes of responsibility may occur, this plan offers a process by which the transition can be effected with minimum risk of disrupting ongoing operations.

All current work elements will be assigned to SLAs and/or GSAs. This document provides a generic process for initiating the consolidation of current work tasks, the phase-in period, and the completion of the transfer.

In this plan the terms “transition” and “phase-in” are used frequently. The term “transition” refers to the overall activities and functions that occur in implementing the goals of the National Performance Review and the NASA Zero Base Review. The term “phase-in” refers to the period of time when work activities are being defined by SLAs and GSAs through the time when the contractor assumes full responsibility for that work.

Contents

Preface

Executive Summary

Section 1. Purpose and Scope

Section 2. Approach

2.1	General.....	2-1
2.2	Transition Methodology Overview.....	2-1
2.3	Transition Criteria	2-3
2.4	Consolidated NMOS Work Authorization Mechanisms	2-3
2.4.1	Service Level Agreement (SLA)	2-3
2.4.2	General Support Agreement (GSA)	2-4
2.4.3	SLA/GSA Identification.....	2-4

Section 3. Consolidated NMOS Organization

3.1	General.....	3-1
3.2	Organization Overview.....	3-1
3.2.1	Business Support.....	3-1
3.2.2	Program Services.....	3-1
3.2.3	Project and Mission Management.....	3-3
3.2.4	Advanced Engineering	3-3
3.2.5	Development and Sustaining Engineering	3-3
3.2.6	Operations and Maintenance.....	3-3
3.3	Allocation Between NASA and Consolidated NMOS.....	3-3
3.4	Organizational Responsibilities, Roles, and Interfaces.....	3-5
3.4.1	General.....	3-5
3.4.2	Program Management Team (PMT).....	3-5
3.4.3	Operations Transition Team	3-6
3.4.4	Scope of Work Team.....	3-6
3.4.5	Communications Team.....	3-6
3.4.6	Technical Area Owner (TAO)	3-6
3.4.7	Technical Area Manager (TAM).....	3-7
3.4.8	SLA/GSA Implementation Team (SIT)	3-8
3.4.9	Functional Organizations.....	3-8

3.4.10 Insight, Oversight, and Product/Information Flow.....	3-9
--	-----

Section 4. Transition To Operations

4.1 General.....	4-1
4.2 Transition Technical Meetings	4-1
4.3 Transition Implementation Overview.....	4-1
4.4 Phase-in Work Packages	4-3
4.5 Monitoring, Visibility, and Assessing Status	4-3
4.6 Phase-in Work Package Initiation (PWPI)	4-3
4.7 SLA/GSA Readiness Review (SRR).....	4-4
4.8 SLA/GSA Operational Readiness Review (SORR)	4-5
4.9 Transition To Consolidated Operations.....	4-5

Section 5. Master Transition Schedule

Section 6. Logistics, Staffing, And Administration

6.1 General.....	6-1
6.2 Facilities And Property.....	6-1
6.3 Staffing And Recruiting.....	6-1
6.4 Security.....	6-2
6.5 Financial Considerations.....	6-2

Figures

3-1	Consolidated NMOS Organization.....	3-2
3-2	Conolidated NMOS Interfaces and Working Relationships.....	3-10
4-1	Generic SLA/GSA Phase-in Schedule.....	4-2
4-2	Transition Activities, Responsibilities, and Review/Approval.....	4-2

Tables

3-1	Allocation Between NASA and Consolidated NMOS.....	3-4
-----	--	-----

Appendix A. Consolidated NMOS Transition Team Charters

Appendix B. SLA/GSA Phase-in Work Package Instructions

Appendix C. SLA/GSA Phase-in Checklist for Technical Area Owners

Glossary

Section 1. Purpose and Scope

This document defines processes to be used during the phase-in period of the Consolidated Network and Mission Operations Support (Consolidated NMOS) contract, scheduled to occur from April through July 1996. Specifically, this plan:

- a. Defines the approach for transitioning the work assigned to the existing GSFC NMOS and SEAS contracts, and the Wallops Range and Sub-orbital/Orbital Operations contracts Statements of Work (SOWs) into consolidated collections of work called Service Level Agreements (SLAs) and General Support Agreements (GSAs) as defined in Section 3.
- b. Describes the approach for consolidating work functions and criteria for transitioning to consolidated work operations.
- c. Describes the organizations involved in the transition process and the roles, responsibilities, and interfaces between NASA and the Consolidated NMOS contractors during transition.
- d. Describes activities necessary to support the transition of personnel and the assumption of certain civil servant tasks.

Section 2. Approach

2.1 General

The approach to Consolidated NMOS transition addresses the need for the Consolidated NMOS team to continue current levels of support/services while transitioning to a performance-based work structure. During the phase-in period, there are four integrated teams established to finalize the processes and resolve issues related to transition. These teams include:

- a. Program Management Team.
- b. Operations Transition Team.
- c. Scope of Work Team.
- d. Communications Team.

The team charters appear in Appendix A and their roles and responsibilities are described in Section 3.

2.2 Transition Methodology Overview

The Program Management Team (PMT), co-chaired by NASA and a senior manager of the Consolidated NMOS contractor team, provides oversight to the entire consolidation process and is the final authority for all activities and issues during the phase-in period.

The transition approach uses SLAs and GSAs to identify work to be packaged together for consolidated operations. The Scope of Work Team identifies the list of SLAs and GSAs and recommends its approval to the PMT. The PMT selects NASA Technical Area Owners (TAOs) and contractor Technical Area Managers (TAMs) for each SLA and GSA. The Technical Area Owners and Managers select and lead SLA/GSA Implementation Teams (SITs) who assist them in writing SLAs and GSAs and in preparing Phase-in Work Packages (PWPs). PWPs are detailed plans of the activities necessary to consolidate the work and to successfully transition to consolidated work operations.

The TAOs, TAMs, and SITs follow the processes, schedules, and templates defined by the Operations Transition Team in this Master Transition Plan and its appendices. The transition period for each SLA/GSA starts with the establishment of its SIT and is completed when the PMT authorizes consolidated operations following an SLA/GSA Operational Readiness Review presented to the PMT by the TAO and TAM.

This approach will result in the successful consolidation of designated work and functions within the Consolidated NMOS contract with no interruption to on-going operations.

Prior to and during the phase-in period, the Communications Team shall be responsible for developing, coordinating, and conducting training for government and contractor employees involved in the contract consolidation. An orientation will provide a high-level, broad introduction to contract consolidation activities, performance-based contracting, SLAs, and benefits and opportunities for the workforce. The orientation will be presented to all employees at the beginning of the phase-in period. Within 6 months, employees will be provided with more detailed training on the SLA and GSA structures and implementation. Other training will be provided at the request of the PMT or the other joint NASA/contractor teams. In addition, communication to and from the other joint NASA/contractor teams will be coordinated as requested.

This plan requires that each TAM prepare an SLA/GSA PWP that describes and schedules the elements of work to be consolidated into the SLA/GSA, defines responsibilities, and establishes evaluation criteria for each work element. The PWP contents are described in detail in Appendix B. The PWP is a complete work plan for consolidating the work from the three contracts into the consolidated work environment. It documents all the necessary management, technical, and logistical planning and processes necessary to prepare for performing the SLA/GSA in the new environment. The PWP template in Appendix B and the Phase-in Checklist in Appendix C identify criteria that must be satisfied for a successful transition and includes, among other items, staffing profiles, GFE allocations, GFE movement and set-up procedures, documentation and deliverable items, facilities, software and software tools, communications requirements, definition of internal and external interfaces, compliance matrix, and any support required from NASA. The SITs will follow this template to develop their PWPs. As part of this package, each SIT will develop specific transition criteria for their own SLA/GSA.

The TAO will monitor and evaluate the readiness of the Consolidated NMOS contractor to assume responsibility for consolidated operations. The TAM, supported by the SIT, will present the PWP to the TAO at an SLA/GSA Readiness Review. When the TAO believes the contractor is ready to enter into consolidated operations, and prior to an SLA/GSA beginning consolidated operations, an SLA/GSA Operational Readiness Review will be held at which the TAO and TAM will present to the PMT evidence that preparations are complete. The PMT will approve the PWPs before the responsibility for consolidated operations is transferred to the Consolidated NMOS contractor. Following approval by the PMT, the PWP will be the master working document by which transition of those major functions will be accomplished.

Finalizing the PWP requires gathering and assembling supporting data and completion criteria which will occur under the direction of the TAO and TAM during the phase-in period. Periodic reviews of progress will be made through reports and regularly scheduled meetings with the PMT to assess the progress against the master schedule and to resolve issues as they occur.

2.3 Transition Criteria

The Consolidated NMOS transition methodology criteria are:

- a. Continued, uninterrupted support to on-going operations.
- b. A consolidated management structure (as specified in the proposed organizational structure).
- c. Contractor assumes responsibility for all routine Consolidated NMOS functions.
- d. A defined customer/user interface for both technical interchange and reporting.
- e. An in-place performance measurement system.
- f. Key, qualified personnel in place, and trained in performance-based contracting.

The transition methodology is to develop PWPs to transfer work, responsibility, and evaluation criteria for each NMOS cost center, SEAS task assignment, and Wallops SOW item into consolidated SLAs and GSAs.

2.4 Consolidated NMOS Work Authorization Mechanisms

All work performed under the Consolidated NMOS contract shall be assigned or amended by NASA Technical Area Owners using the NMOS contract technical directive (TD) mechanism for work within the scope of the NMOS Statement of Work. The work will be packaged as SLAs and/or GSAs. The TAO will determine the distribution of assigned work among SLAs and/or GSAs.

An SLA/GSA must be approved by the PMT and the Contracting Officer before work is authorized to begin. To add work to or delete work from an SLA/GSA, the government issues either a replacement SLA/GSA or an amended SLA/GSA using the TD mechanism. In such instances, the contractor shall determine whether the amendment requires a change to the target price, and if so, the Change Review Board and Contracting Officer negotiate the new SLA/GSA parameters and target price with the contractor.

Receipt of an SLA or GSA or an amended SLA/GSA results in the contractor issuing one or more SLA/GSA Authorization Orders (SAOs) within the NMOS contractor organization to authorize one or more TAMs to plan and perform the work.

2.4.1 Service Level Agreement (SLA)

- a. An SLA identifies services and products to be delivered, specifies a schedule for the services and products, defines metrics to be used to assess the performance of the SLA, and, following negotiations between the government and the contractor, specifies a target price for the services and products.
- b. An SLA is used to assign work to the contract when the requirements, products and services, and schedule are well-defined, the work is to be performed entirely by the contractor, and performance can be evaluated through defined metrics.

- c. An SLA may consist of a series of “mini-SLAs”, such as for a series of related missions. In such cases, the definition of a mini-SLA is the same as an SLA.
- d. An example of an SLA is the ISTP series of missions. An example of a mini-SLA within the ISTP family is the Cluster mission.

2.4.2 General Support Agreement (GSA)

- a. A GSA identifies services and products to be delivered, specifies a schedule for the services and products, and, following negotiations between the government and the contractor, specifies a target price for the services and products.
- b. A GSA is used to assign work to the contract when the requirements, products, or services are not well-defined, the work is to be performed by the contractor in collaboration with NASA or another contractor, or performance cannot be evaluated through defined metrics.
- c. Examples of a GSA are efforts in support of the HST Vision 2000 and efforts in support of the Software Engineering Laboratory.

2.4.3 SLA/GSA Identification

The Scope of Work Team will develop a list that identifies SLAs and GSAs to be phased-in. Cost center numbers will be allocated to each SLA and GSA by the Consolidated NMOS project control office following review with the Resource Management Offices of Code 503 and/or Code 801, as appropriate. Current work (tasks and cost centers) will be mapped to each SLA and GSA. The mapping will be coordinated by the Operations Transition Team.

Section 3. Consolidated NMOS Organization

3.1 General

The contractor team is led by AlliedSignal Technical Services Corporation (ATSC) supported by Computer Sciences Corporation (CSC). ATSC and CSC may retain their present subcontractors during the Consolidated NMOS contract period. The Consolidated NMOS organization is presented in Figure 3-1, which shows the Program Manager supported by a staff dedicated to Business Support and Program Services. Performing the technical efforts of the program are the Project and Mission Management organization and three functional organizations: Advanced Engineering, Development and Sustaining Engineering, and Operations and Maintenance. These functional organizations are staffed with those personnel from each of the Consolidated NMOS team partners who are best qualified to perform the work. Each functional organization provides the staff and skills necessary to support work required by the SLAs and GSAs.

The Program Manager reports directly to the ATSC Vice President of Civilian Space. The managers of Business Support, Program Services, Project and Mission Management, Advanced Engineering, Development and Sustaining Engineering, and Operations and Maintenance all report directly to the Program Manager.

3.2 Organization Overview

3.2.1 Business Support

The Business Support organization is responsible for accounting, financial planning and control, project control, contracts and pricing for all subcontracts purchasing and Small Business Administration, and is the central point for procurement of components and materials.

This organization has responsibility for maintaining configuration control of baselined SLA/GSA schedules, work breakdown structures, work plans, staffing profiles, budgeted work costs, spending projections, and, when applicable, earned value determinations.

The organization also provides human resources support and has central responsibility for staffing, compensation and benefits, labor and employee relations, employee development, equal employment opportunity program administration, and conduct of employee and management training for the consolidated NMOS team. Subcontractors provide human resources support consistent with their corporate policies.

3.2.2 Program Services

The Program Services organization responsible for quality policy implementation and initiation of periodic audits to ensure program criteria compliance. Program Services is responsible for generating product quality reports for all facilities, systems, and equipment performance assessment. Program Services provides policy for health, safety, and environmental matters and is responsible for ensuring that safety procedures are in place and inspected periodically.

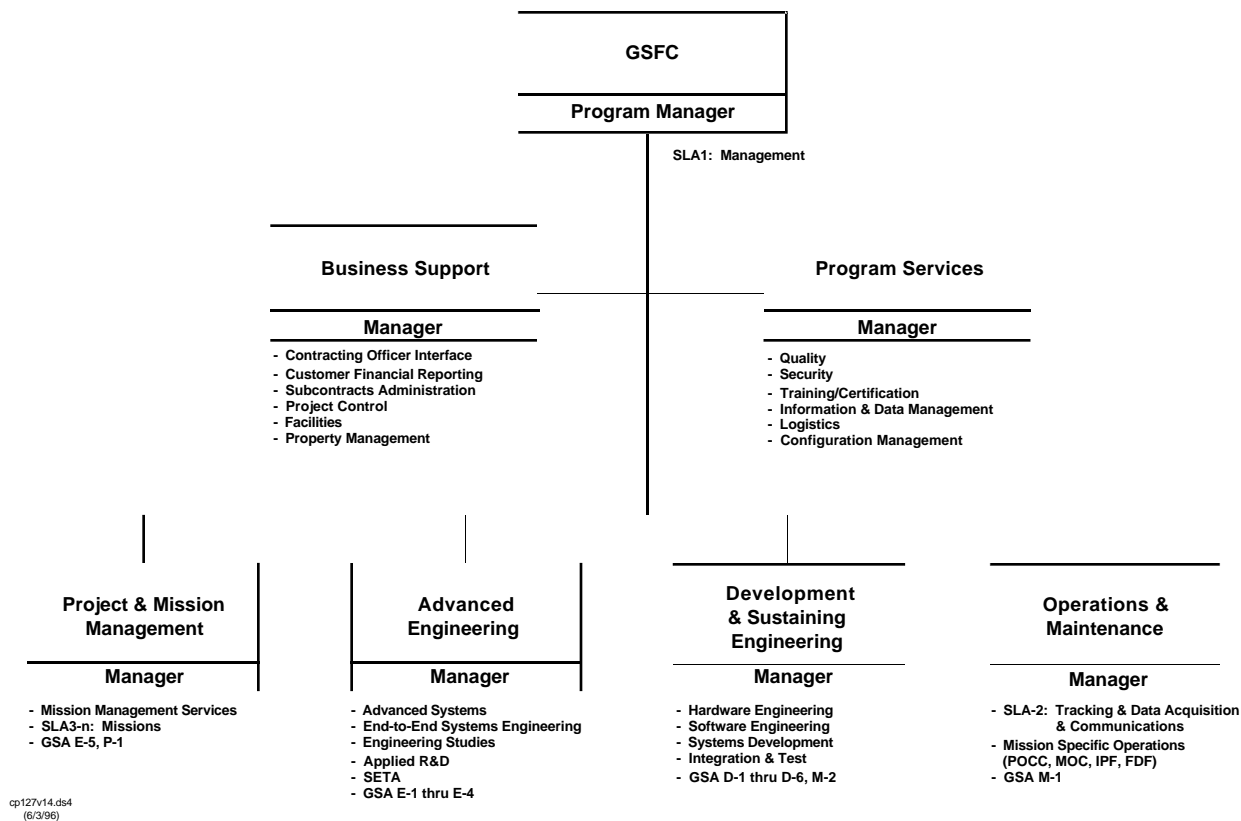


Figure 3-1. Consolidated NMOS Organization

This organization also provides security support and is responsible for automated data processing security, secure operations, security administration, and industrial and operational security programs; controls classified or proprietary documentation; and has responsibility for physical security aspects. This organization will coordinate badging, and security clearance issues during the phase-in period.

3.2.3 Project and Mission Management

The Project and Mission Management organization provides overall project and mission management activities for all mission SLAs, including the planning, resource control, service quality control, development, and operations associated with mission support. TAMs assigned to this organization are responsible and accountable for meeting SLA metric, schedule, and cost criteria. Personnel and other resources to support the project and mission management are drawn from the functional organizations.

3.2.4 Advanced Engineering

The Advanced Engineering organization will conduct advanced systems engineering studies and end-to-end systems engineering activities, conduct engineering studies and provide R&D support.

3.2.5 Development and Sustaining Engineering

The Development and Sustaining Engineering organization will provide systems, hardware, and software engineering, development, integration, and test expertise, including the resources for mission and network development and sustaining engineering efforts.

3.2.6 Operations and Maintenance

The Operations and Maintenance organization will provide personnel and other resources for the operation and configuration management of ground system facilities and functions. This includes the White Sands Complex, Mission/Network Control Centers, the Flight Dynamics Facility, Flight Operations, Data Processing Facilities, Ground Network (including the GN portion of Wallops), and Communications.

3.3 Allocation Between NASA and Consolidated NMOS

Table 3-1 describes at a high level the general changes in the allocation of work elements, roles and responsibilities, and interfaces between NASA and ATSC/CSC from the current contracts to the Consolidated NMOS.

Table 3-1. Allocation Between NASA and Consolidated NMOS

Work Element	Current	Consolidated NMOS
Program Management	Both	Contractor
• Performance Accounting (Metrics)	Both	Contractor
• Training	Both	Contractor
• Configuration Management	Both	Contractor
• Documentation	Both	Contractor
• Property Management	Both	Contractor
• Safety, Security, and Quality Assurance	Both	Contractor
• Subcontract Management	Contractor	Contractor
• Performance Evaluation	NASA	NASA
Budgets	NASA	NASA
Financial and Administration	Both	Contractor
• Cost and Schedule Accounting	Both	Contractor
Strategic Planning	Both	Both
Research and Development	Both	NASA*
Mission Planning	Both	NASA*
• Requirements Analysis	Both	NASA*
• Trajectory Analysis	Both	NASA*
Development	Both	Both**
• Systems Engineering	Both	NASA*
• Hardware	Both	Both**
• Software	Both	Both**
• Testing	Both	Both**
• Sustaining Engineering	Contractor	Contractor
Program Integration	Both	Both**
Maintenance	Contractor	Contractor
• Hardware	Contractor	Contractor
• Software	Contractor	Contractor
• Testing	Both	Both**
• Sustaining Engineering	Contractor	Contractor
Operations	Both	Contractor
• Systems Engineering	Both	NASA*
• Flight Operations	Both	Both**
• Tracking Data Evaluation	Both	Contractor
• Ground Network Operations	Both	Contractor
• Space Network Operations	Both	Contractor
• Communications	Both	Contractor
• Telecommunications	Both	Contractor
• Weather/Forecasting	Both	Contractor
• Optical and TV	Both	Contractor
• Radar	Both	Contractor
• Ground Operations	Both	Contractor
• Operational Readiness Testing	Both	Contractor
• Security	Both	Contractor
• Logistics	Both	Contractor
RF Compatibility Testing	Both	Contractor
Facilities Management (Building Maintenance)	Both	Both

* Under Consolidated NMOS, in cases where NASA will retain insight for a work element, NASA may elect to give all or part of the performance of the work element to the contractor under a TD. In these cases, NASA appears in the Consolidated NMOS column.

** Under Consolidated NMOS, in cases where some work goes to the contractor but NASA selectively performs some work with Civil Servant employees, "Both**" appears in the Consolidated NMOS column.

3.4 Organizational Responsibilities, Roles, Interfaces

3.4.1 General

Transition of major work elements to consolidated operations will be accomplished by work teams from the functional organizations, led by the TAOs, TAMs and SITs in full coordination with the PMT and the Scope of Work and Operations Transition teams. The primary objective of these interfaces is to assure continuing the generation of timely high-quality products and services while accomplishing a smooth transition. The following sections contain specific descriptions of the roles and responsibilities of these organizations and teams.

3.4.2 Program Management Team (PMT)

The PMT is a joint NASA/contractor management team consisting of senior representatives from NASA, AlliedSignal, and CSC. It has overall responsibility for successfully transitioning current GSFC NMOS and SEAS contracts and the Wallops Range and Sub-orbital/Orbital Operations contract to the Consolidated NMOS contract. The Team will establish the NASA and contractor Program Offices, establish the Change Review Board (CRB), install key personnel, and monitor and approve the transition to Consolidated NMOS operations.

The PMT has final authority for all phase-in activities. The PMT will approve the Master Transition Work Plan, resolve phase-in issues, provide advice to elements involved in the transition process, and monitor transition progress. The PMT will be the final authority for approval of all phase-in activities. A subset of this team will become the Change Review Board (CRB) upon completion of phase-in activities.

At the SLA/GSA Operational Readiness Review (SORR), the PMT will review each SLA/GSA PWP content for completeness, accuracy, schedule and cost realism, and feasibility. When all these criteria are met, the PMT will authorize implementation of the PWP and the transition to consolidated operations of the SLA/GSA can proceed.

At the SORR, the PMT will determine that the TAO and TAM agree with the elements of work defined in the PWP, that the work elements are clearly communicated and include all required activities and events, that the task elements map to the WBS and/or SOW; that key management interfaces have been identified; that a configuration management plan is in effect (when applicable); and that there is a procedure for refining the SLA/GSA work package during the period of the work being performed. The PMT will define follow-up activities needed to ensure that work is being adequately performed.

The PMT is responsible for establishing a performance evaluation program for rating the contractor's performance of the work. This includes ensuring that each SLA clearly establishes the level of performance that is to be provided and the criteria for determining that the performance level has been achieved.

The PMT is responsible for overseeing the implementation of administrative functions. During the phase-in period, the contractor administrative and financial management functions must be integrated and modified to provide the management, financial, and contract reports and metrics required for Consolidated NMOS operations.

During the phase-in period the PMT will monitor the progress of each SIT's phase-in activities and will take an active role in resolving issues and solving problems. The PMT will also distribute minutes suggesting best practices and identifying problem areas.

Only the PMT or CRB may approve deviations to the Master Transition Plan and PWP phase-in plans and schedules.

3.4.3 Operations Transition Team

The Operations Transition Team is a joint NASA/contractor team responsible for defining phase-in roles and responsibilities, working interfaces, and estimating the work element distribution between NASA and the contractor for Consolidated NMOS operations. In addition, this team will provide accountability of work actions to be transferred, and identify PWP requirements.

3.4.4 Scope of Work Team

The Scope of Work Team is responsible for developing two Service Level Agreements and a generic Mission SLA model, identifying the remaining SLAs and GSAs, recommending the work to be consolidated into each SLA and GSA, and developing a Project Work Breakdown Structure for the Consolidated NMOS contract.

3.4.5 Communications Team

The Communications Team is responsible for providing the training and orientation for NASA and contractor personnel for Consolidated NMOS.

3.4.6 Technical Area Owner (TAO)

The TAO is a NASA employee who serves as the government's point of contact for mission and policy matters for SLAs and GSAs and raises unresolved issues to the PMT and CRB. The owner prepares mission requirements, spacecraft tradeoff studies, and operations concepts, where applicable. With the contractor TAM, the TAO defines the contents of the SLA or GSA, and issues the SLA or GSA to the contractor through the PMT/CRB and the Contracting Officer. The TAO and TAM select the SIT and use their expertise as necessary in planning the SLA/GSA work using the PWP concepts and templates described in this plan and its appendices.

When the TAM believes the SLA/GSA PWP is complete, the TAO co-chairs with the TAM's manager an SLA/GSA Readiness Review (SRR). The SRR, presented by the TAM, is an in-depth review of and investigation into all aspects of the PWP, including the basis of estimate for the SLA/GSA, to ensure that the SLA/GSA is ready to transition to consolidated operations. When the TAO is satisfied with the results of the SRR, he/she is responsible for scheduling an SLA/GSA Operational Readiness Review (SORR) with the PMT/CRB.

The TAO and TAM are responsible for presenting a high-level summary of the SLA/GSA PWP, including the proposed price for the SLA/GSA, at the SORR.

The TAO and TAM will determine when work that is to be transitioned meets the criteria for transition and will determine the schedule for work to be transitioned.

The TAO is responsible for ensuring that civil servants are prepared for the transition of work. This includes explaining what work is to be transitioned to the contractor and enlisting their cooperation and support in arranging for a smooth transition. The TAO is responsible for ensuring that documentation (such as work plans and work procedures) is available to the contractor upon transition. This includes ensuring that documentation is up to date and adequate for the transition. If documentation is lacking, incomplete, or obsolete, the TAO will arrange for updating documentation prior to stating that work is ready for transition.

The TAO is responsible for determining that the contractor has adequate controls in place to assure quality of operations and operational products. This includes performance criteria and performance rating criteria and a quality assurance program.

After transition to consolidated operations, the TAO is responsible for providing overall management of the SLA/GSA, including budget, schedule, operational performance ratings, and for evaluating operational performance, reviews, and reports. The TAO is responsible for issuing all modifications to the SLA/GSA through the Contracting Officer.

3.4.7 Technical Area Manager (TAM)

The TAM is a contractor employee who serves as the point of contact for the SLA/GSA and provides overall contractor management functions. The TAM is responsible for obtaining, training, and managing the correct staff and skill mix to execute the PWP in the consolidated operational environment. The TAM is responsible for ensuring that work is performed in accordance with the PWP and for ensuring that all work identified in the SLA/GSA is performed on time, within budget, and within the requirements of all performance metrics.

The TAM works with the TAO to define the SLA/GSA and select and lead the members of the SIT. He/she is responsible for preparing the PWP according to the guidelines of this plan and its appendices. The TAM is responsible for preparing the SLA/GSA WBS and Basis of Estimate, and for obtaining internal approvals for both by coordinating with the Consolidated NMOS project control office.

The TAM is responsible for presenting the SRR to his/her manager and the TAO and for presenting, with the TAO, the SORR to the PMT.

The TAO and TAM will determine when work that is to be transitioned meets the criteria for transition and will determine the schedule for work to be transitioned.

Working with the TAO, the TAM will determine that a Government Furnished Equipment (GFE) and contractor capital equipment control and maintenance plan is in effect. This includes agreement as to what capital equipment is to be provided by the contractor. Generally, capital equipment is an inventory of business office equipment that the modern business office would be expected to have, such as desktop computers and reproduction equipment, electronic local area networks, and duplicating equipment, electronic local area networks, and duplicating equipment. For either GFE or capital equipment, an inventory of the equipment, necessary spares, maintenance and operating procedures, and equipment controls to prevent theft should be in place.

The TAM is responsible for obtaining the necessary skilled people to perform the work. This includes defining types of skills that are necessary and determining a schedule for when these people are available to assume work. If people are not completely skilled to assume work, the TAM must arrange for training and a schedule for demonstrating full capability to perform the work. The TAM is responsible for adequately preparing people to perform the work, including explaining the scope of work to be performed and the level of performance that is expected of them; where the work will be performed; and instilling in them a level of confidence that they can adequately perform the work.

The TAM is responsible for ensuring that the necessary facilities are available to assume work or that government-furnished facilities have been identified for this work. This includes necessary physical space that is appropriately lighted, heated, air conditioned, and ventilated for the people and equipment necessary to perform the work.

After transition to consolidated operations, the TAM is responsible for managing the SLA/GSA work in accordance with the approved PWP and in accordance with the negotiated price.

3.4.8 SLA/GSA Implementation Team (SIT)

The SIT is chosen and led by the TAO and the contractor TAM, and is composed of selected technical and management specialists (contractor and civil servants) who are individually assigned in accordance with their expertise to support the TAO and TAM in planning, preparing for, and implementing phase-in of the SLA/GSA. The SITs also have access to other corporate team resources if the need arises. The SIT working interfaces with the functional organizations and the administrative and support organizations are established and maintained throughout the phase-in process.

The primary SIT functions throughout the phase-in period are to support the TAM in developing the SLA/GSA detailed work packages in accordance with this Master Transition Plan and its Appendices and assist in coordinating completion of the PWP for approval by the TAO and the PMT. The SIT is responsible for assisting the TAO and TAM in overseeing all phase-in activities, including integrating all work requirements, managing the assets to be transitioned and assuring the adequacy of the supporting organizations. The SIT is responsible for ensuring that the impact of the phase-in process on ongoing work is minimized.

After transition to operations is approved by the PMT, a subset of the SIT may become the SLA/GSA work force leaders for accomplishing the planned work according to the schedule, metrics, and budget established during the phase-in planning period.

3.4.9 Functional Organizations

The functional organizations provide support to the TAOs', TAMs' and SITs' efforts to define detailed requirements, generate and implement the PWPs and other transition plans, and provide status to the PMT. The functional organizations also will support the TAM in preparing for SRRs and SORRs.

The managers for Advanced Engineering, Development and Sustaining Engineering, and Operations and Maintenance, and Wallops are the primary interface points for the functional organizations. Working interfaces are established with the SITs and NASA technical management as required. Technical interfaces at the working level are established to assure the needed routine exchange of information.

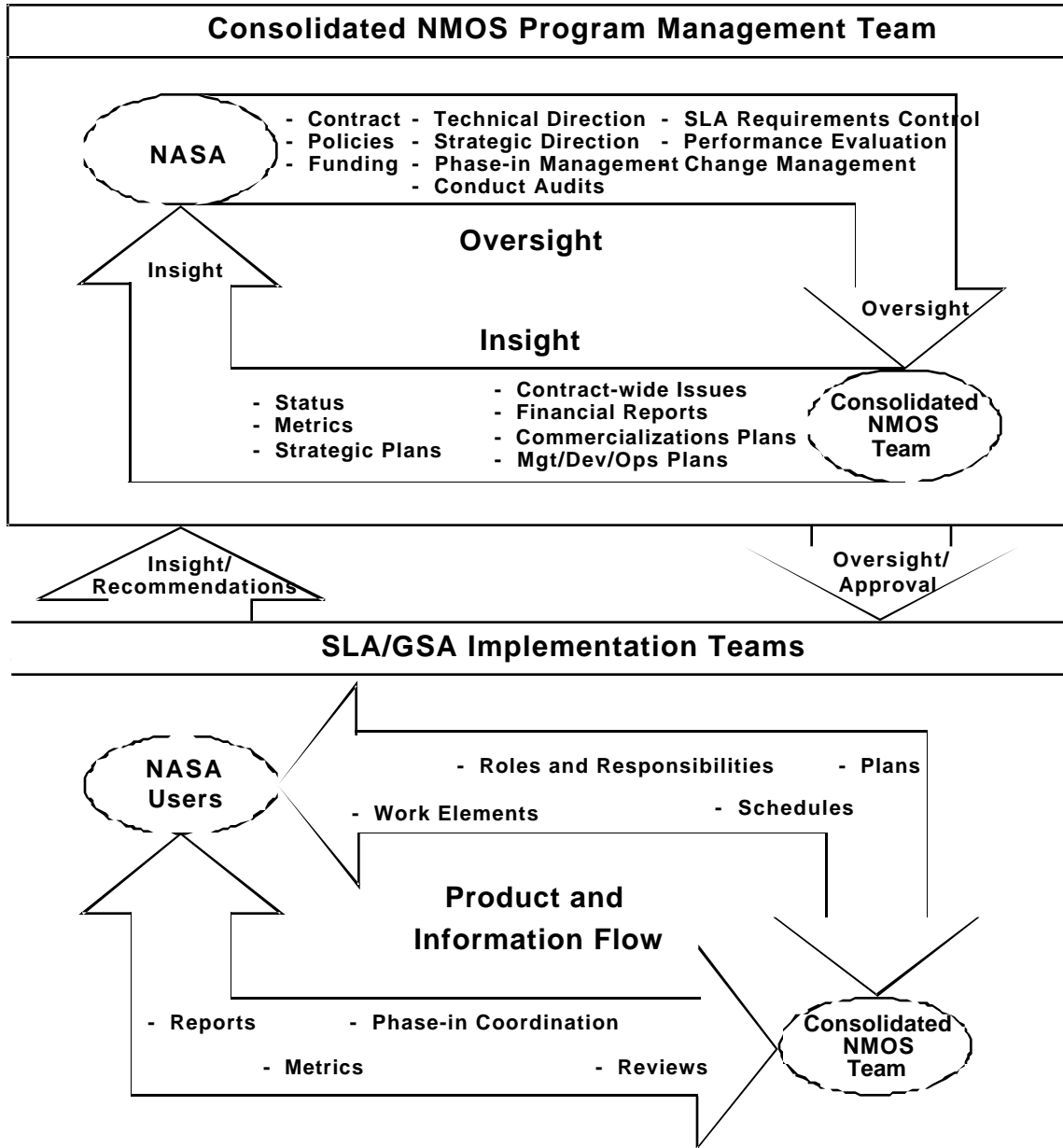
3.4.10 Insight, Oversight, and Product/Information Flow

To be successful, the organizations and teams described in the preceding paragraphs must interface with each other in ways that are new to both the government and to the Consolidated NMOS contractors. Figure 3-2 summarizes the relationships that must exist between these diverse groups.

Insight refers to data and information that is provided by the contractor for the purpose of assisting the government in understanding the level of performance achieved for work defined in SLAs and GSAs. This includes information presented in the form of programmatic metrics (contract-wide data, such as financial and status information), reports, products, and meeting presentation materials.

Oversight refers to formal direction and authorization from the government to the contractor at the Program level regarding contractual and policy decisions, technical and strategic direction, requirements control, performance evaluation, change management and funding issues.

Product and Information Flow is the exchange of routine information for the purpose of ensuring the TAOs and TAMs that nominal services are being provided. The information may be used to coordinate/negotiate operational adjustments that are within scope and budget, but is not intended as day-to-day monitoring.



cp134001.v3 (04/17/96)

Figure 3-2. Consolidated NMOS Interfaces and Working Relationships

Section 4. Transition To Operations

4.1 General

Throughout the phase-in period, work will continue as normal under the current contract work plans. As plans for transitioning and phasing into consolidated operations near implementation, the TAOs and TAMs will use the SITs to ensure that all people involved in and affected by the change in operations are informed of plans and are empowered to raise any issues that must be resolved in order to successfully implement the change.

4.2 Transition Technical Meetings

Technical meetings, under leadership of the TAOs and TAMs, will be scheduled during the phase-in period to obtain data and finalize the work packages for each SLA/GSA. The purpose of the technical meetings is to accomplish such activities as:

- Assure understanding of the workings and the interrelationships of the tasks of each major function, identify problems associated with transitioning, and identify potential solutions

- Finalize the data, procedures, equipment, software and software tools, and other support resources.

- Establish and implement the internal and external interfaces of the SLA/GSA.

- Identify risks and plan necessary mitigation.

4.3 Transition Implementation Overview

Implementation of transition activities can take place following approval of this Master Transition Work Plan by the PMT. Figure 4-1 and 4-2, respectively, summarize the generic phase-in process for an SLA/GSA and the activities, responsibilities, and review/approval authorities.

Before phase-in of an SLA/GSA can occur, the TAO and TAM must have been chosen, the current contract work that is to be consolidated must have been mapped to the SLA or GSA, the SLA/GSA must have been written, and the SIT must have been selected by the TAO and TAM.

Throughout the phase-in process, work continues under the current contract mechanisms and organization and the TAO and TAM must coordinate specific phase-in activities with incumbents.

Implementation of the PWPs will be accomplished through a series of three transition events:

- PWPI - Phase-in Work Package Initiation.

- SRR - SLA/GSA Readiness Review.

- SORR - SLA/GSA Operational Readiness Review.

A definition and summary level criteria for each transition event is contained in the following sections.

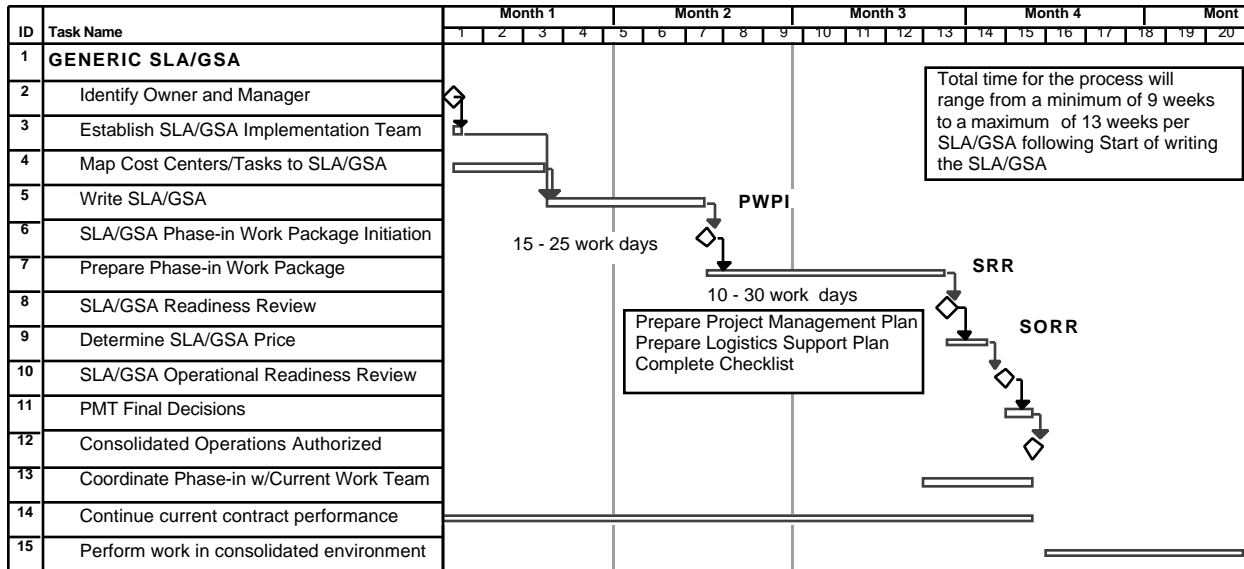


Figure 4-1. Generic SLA/GSA Phase-in Schedule

Activity	Responsible	Review/Approve
Continue current contract performance	Current work team	Current Management
Identify SLA/GSA list	Scope of Work Team	PMT
Identify SLA/GSA Owners & Managers	PMT	None
Draft first two SLAs and Mission Model SLA	Scope of Work Team	PMT
Draft remaining SLAs	TAO and TAM	PMT
Select SIT members	TAO and TAM	None
Map tasks/cost centers to SLAs/GSAs	Operations Transition Team	PMT
Refine work mapping to SLAs/GSAs	Operations Transition Team	PMT
Develop Phase-in Work Package	TAM	TAO and TAM
Conduct SLA/GSA Readiness Review (SRR)	TAM	TAO and TAM's Manager
Conduct SLA Operational Readiness Review	TAO and TAM	PMT
Coordinate Phase-in with Current Work Team	TAO and TAM	PMT
Begin Consolidated SLA Operations	TAO and TAM	None

Figure 4-2. Transition Activities, Responsibilities, and Review/Approval

4.4 Phase-In Work Packages

The PWP, described in detail in Appendix B, is the repository for the information, agreements, data, and schedule used to prepare for, track, assess the status of, and implement the phase-in of NMOS, SEAS, and Wallops contract work to the consolidated environment. The PWPs are prepared by the TAM, supported by the SIT and functional organizations. Data contained in the work package are used to judge preparedness for initiating transition and performing necessary work in the post-transition era. The elements of the PWP that directly address the work of the SLA/GSA (such as the scope of work, schedules, and planned staffing and cost levels) will be baselined and placed under project configuration control.

A PWP documents the information, agreements, data, and descriptive narrative necessary to effectively and smoothly transition the work to the Consolidated NMOS team. The work packages are derived from the SLAs/GSAs, SEAS task assignments, NMOS cost centers and the Wallops SOW. For each WBS element of each SLA/GSA, a standard cost account format will be used to correlate baselined work schedules with time-phased staffing and cost budgets, actual costs, and, when applicable, earned value. When approved by the PMT, these data items will be baselined and used to sum data to the SLA/GSA level and intermediate levels, leading to a controlled Consolidated NMOS baseline.

The PWPs will be documented using the on-line Consolidated NMOS Project Management Information System and any current version of the PLANET project manager's planning tool. Managers who do not yet have on-line access to these tools will be provided tool support by the project control office, which will also upload the data into the on-line system.

4.5 Monitoring, Visibility, and Assessing Status

Monitoring, visibility, reporting, and assessing the status of on-going work under current contract work assignments will continue through phase-in completion, including government monitoring. Transition monitoring, status assessment, and visibility are provided through regularly scheduled meetings between the TAOs, TAMs, and PMT. These meetings will occur bi-weekly and will focus on status of work elements targeted for transition. Ad hoc meetings may be called if a TAO or TAM needs decision support or an issue to be resolved.

4.6 Phase-In Initiation (PI)

Phase-in Initiation (PI) begins a 4 to 6 week period that starts when the PMT approves a proposed SLA or GSA and issues it to the Consolidated NMOS Program Management Office (PMO). The PMO issues an SLA/GSA Authorization Order (SAO) that authorizes the TAM to begin planning activities. The SAO includes new cost center identifications, a copy of the Master Transition Work Plan, a copy of the transition schedule for the SLA/GSA, and an up-to-date copy of the task/cost center-to-SLA/GSA work mapping. This mapping, controlled and updated by the Operations Transition Team for the PMT, is a listing of the current work that is to be consolidated into each SLA and GSA.

During this 4-6 week period, the TAM, prepares a Project Management Plan, a Logistics Support Plan, and completes all items on the SLA/GSA Phase-in Checklist (Appendix C). The details of the Project Management Plan and Logistics Support Plan are contained in Appendix B to this plan, and cover all aspects of the phase-in period. All items in these documents must be addressed for each SLA/GSA. If any item does not apply, the TAM shall state "Not Applicable." In some cases, particularly in some GSAs, a Project Implementation Plan (an on-line abbreviated form of the Project Management Plan) may be used in lieu of the Project Management Plan. To use this format, coordinate with the project control office.

Near the end of the planning period, the TAO and TAM begin planning specific transition activities with the incumbent team that is working on activities about to be phased into consolidated operations.

4.7 SLA/GSA Readiness Review (SRR)

The TAM, supported by the SIT, presents the SLA/GSA Readiness Review (SRR) to the TAO and the TAM's manager, who co-chair the review. The presentation includes a brief summary overview of the SLA/GSA PWP, details of all aspects of the Project Management Plan and the Logistics Support Plan, the completed Phase-in Checklist, and a detailed review of the Basis of Estimate for the SLA/GSA. In general, the SRR review of the plans and checklist should establish that the following minimum criteria have been met:

Organization and qualified staff are in place, available, or under recruitment.

1. Management is in place, and roles are defined.
 2. Reporting relationships and span of control are defined and acceptable.
 3. Functional work assignments are clearly defined.
 4. Qualified people have been identified.
 5. Time-phased staffing plans exist for each element of the project WBS.
 6. Security clearances and area access requirements are defined and met.
 7. Necessary training and certification is satisfactorily identified and planned.
- b. Documented work process procedures, methods, and standards are identified, or a waiver has been requested.
 - c. Support resources (both people and equipment) are defined and scheduled.
 - d. Working internal and external interfaces have been defined, established.
 - e. Completion criteria have been established for transitioning major work elements into the consolidated environment and for assessing work progress and schedule attainment after transition.

The SRR may result in action items that must be reviewed in a follow-up to the SRR or in a decision by the SRR co-chairs to proceed to the SLA/GSA Operational Readiness Review (SORR). A consequence of a successful SRR is that the TAO and TAM agree to the Basis of Estimate. Between the SRR and the SORR, the Consolidated NMOS contractor will price the SLA/GSA using the agreed-upon Basis of Estimate.

4.8 SLA/GSA Operational Readiness Review (SORR)

The TAO and TAM present the SLA/GSA Operational Readiness Review (SORR) to the PMT. This review should occur approximately 5 working days after the SRR, after the contractor has priced the SLA/GSA and after action items from the SRR have been completed successfully. The presentation includes a high-level summary of the material presented at the SRR. It should highlight only important aspects of the Project Management Plan, the Logistics Support Plan, the Basis of Estimate, and all outstanding significant issues. The TAO and TAM deliver a completed and signed copy of the Phase-in Checklist for PMT approval.

The SORR may result in action items that must be reviewed in a follow-up to the SORR or in a decision by the PMT to authorize the contractor to transition to consolidated operations. A consequence of a successful SORR is that the PMT agrees to the SLA/GSA Initial Target Cost, which becomes baselined in the Consolidated NMOS Project Management Information System. The chair of the PMT indicates authorization to proceed by signing the completed Phase-in Checklist.

4.9 Transition to Consolidated Operations

When the PMT authorizes transition to consolidated operations, the Contracting Officer will approve the SLA/GSA and issue authorize the contractor to proceed with executing the transition plans. Upon receiving authorization from the Contracting Officer, the TAO and TAM, and those members of the SIT who will become part of the SLA/GSA work team, execute the transition plans and begin performing work in accordance with the PWP. The TAO and TAM work together to ensure that all of the criteria reviewed during the SRR and SORR are accomplished successfully.

When the transition to consolidated operations begins, all personnel assigned to the SLA/GSA begin charging time and expenses to the new cost centers assigned to the SLA/GSA. Charges are no longer authorized to the old cost centers.

After transition to consolidated operations, the performance evaluation process for the Consolidated NMOS contract will apply.

Section 5. Master Transition Schedule

The Master Transition Schedule is a compilation of all pre phase-in and phase-in activities needed to successfully transition work into the consolidated environment. It includes schedules for writing the SLAs and GSAs, as well as summary schedules for developing each PWP. It will be updated weekly throughout the phase-in period. Coordinating with their TAOs, the TAMs will submit updated SLA/GSA Phase-in schedules by close of business each Friday. Summary progress will be reported weekly at the scheduled PMT meetings by members of the contractor staff.

Section 6. Logistics, Staffing, and Administration

6.1 General

Throughout the phase-in period, consideration must be given to ensure that ongoing facility, staffing, and administrative operations are adequately prepared to transition to the consolidated operations environment. In some cases, new administrative processes will be created. In other cases, the phase-in activities must take into account existing processes that must be adhered to or that must be prepared for accommodating the new environment.

6.2 Facilities and Property

Work will continue in government facilities during the phase-in period. Any changes that impact government facilities will be coordinated through the Technical Area Owners, Managers, SITs and PMT.

Existing facility clearances will remain valid during the phase-in period to allow ATSC and each of the respective ATSC team member subcontractor organizations time to implement appropriate administrative actions with the DIS.

A Consolidated NMOS Property Management Plan will be prepared and submitted to the PMT for approval.

6.3 Staffing and Recruiting

The contractor will retain the skills base represented by the current workforce. The focus will be to select the best qualified personnel to perform the Consolidated NMOS work, regardless of the current company affiliation. If skills are needed that are not currently available in the existing work force, the contractor will recruit qualified personnel.

Staffing information obtained from the baseline contract staffing profile will be used to provide such information as the identity of persons filling key positions, description of each position, skill level, source and availability of personnel, the date persons are expected to fill the positions, training or certification requirements and current status, security clearance requirements and status, and the organization to which the persons are assigned.

During the initial months of Consolidated NMOS, strong emphasis will be made to brief the employees on the importance of their new roles. The Communications Team has structured an employee orientation program aimed at providing help in a broad range of areas. In addition, employee meetings will be conducted by management to explain goals, policies and procedures, and to encourage open and positive communications.

Throughout the phase-in period, meetings will be held for all incumbent personnel to introduce senior managers and the Consolidated NMOS Team. The expectations and the advantages offered by consolidation will be explained. A format for the orderly submission of questions and answers will be utilized.

During the phase-in period, orientation sessions will be held for all members of the NASA and contractor management teams. Conducted by the Communications Team and senior managers, the managers and supervisors will be indoctrinated in the operational methodology and procedures and their administrative responsibilities. These meetings will be scheduled to avoid impacting the ongoing Consolidated NMOS work.

Existing staff will receive job related training and certification where applicable. Management personnel will receive training in performance-based contracting, SLA development and management, and duties and responsibilities under the consolidated performance-based contract.

6.4 Security

Existing security clearances will remain valid during the phase-in period to allow time to coordinate any required action with Defense Investigative Services (DIS). Individual security files and records on all personnel assigned or on loan to the Consolidated NMOS will be maintained. The ATSC Security Department will coordinate security activities.

Existing security badges will remain valid during the phase-in period to allow time to coordinate any required actions with the DIS.

6.5 Financial Considerations

Planning during the phase-in period will take into consideration the need for converting to full cost accounting. A WBS will be established for each SLA/GSA in such a way as to facilitate full cost accounting while meeting current financial reporting needs. Therefore, each SLA/GSA WBS must be coordinated with the Resource Management Offices of Code 503 and/or Code 801, as appropriate, to ensure these needs are adequately met. Final WBS approvals will be given by the Consolidated NMOS Project Control Office.

Valid Through September 30, 1996

Appendix A.

Consolidated NMOS Transition Team Charters

Appendix A. Consolidated NMOS Transition Team Charters

Consolidated NMOS Program Management Team Charter

Team Purpose: To provide a Program Management Office for the Consolidated NMOS Organization. To ensure that the NASA high-level requirements are addressed. To provide substantial learning benefits to GSFC in preparing for CSOC.

Scope: The scope of this team's effort includes the following contracts operated by AlliedSignal and Computer Sciences Corporation:

- Network and Mission Operations Support (NMOS).
- System Engineering and Analysis Support (SEAS).
- Operations and Maintenance of Radar, Telecommunications, Optical and TV Systems and Meteorological Forecasting at GSFC WFF.

Customer: Art Fuchs

Criteria for Quality: Acceptance by the customer of the quality criteria for the work teams as well as schedule for phase-in and target cost for the consolidation operation to October 1997.

The contract will be structured in such a way as to allow cost reduction to the largest extent possible in the following ways:

- Reduced government involvement.
- Introduction of new technology.
- Cost reduction incentives for the contractor.
- Increased efficiency of scale (reduced duplication).
- Pursuit of commercialization.
- Reengineering on both government and contractor sides.
- Facilitate transition to full cost accounting.

Output/Deliverables Schedule:

- Approved integrated schedule (March 21).
- Approved subteam products (per integrated scheduled).
- Approved high-level organization and key positions (March 21).

Valid Through September 30, 1996

Team Process/Schedule: Bi-weekly meetings to coordinate activities of and approve recommendations of the NASA/ATSC/CSC working teams.

- Scope of Work Team (Bill Guion)
- Operations Transition Team (Bill Kelly)
- Communications Team (B.J. Hayden)
- Procurement Team (Bob Kirk)

Per schedule of 2/5/96--Operating under a consolidated contract on 4/1/96 with phase-in completed 7/31/96.

Team Members:

NASA
Dick Tagler
Holland Bell
Phil Liebrecht
Bill Guion
B.J. Hayden
Bob Kirk

Contractors
Wayne Friedman
Jerry Page
Jerry Barsky

Consolidated NMOS Operations Transition Team Charter

Team Purpose: To define the changing roles and responsibilities, working interfaces, risks and risk mitigation process between NASA and the contractor team as required in a performance-based environment. These changes shall be documented at the task/function level in phase-in work packages derived from Work Breakdown Structures (WBSs) of the associated Service Level Agreements generated by the Consolidated NMOS Scope of Work Team.

Scope: The scope of this team's effort includes the following contracts operated by AlliedSignal and Computer Sciences Corporation:

- Network and Mission Operations Support (NMOS).
- System Engineering and Analysis Support (SEAS).
- Operations and Maintenance of Radar, Telecommunications, Optical and TV Systems and Meteorological Forecasting at GSFC WFF.

Customer: Dick Tagler

Criteria for Quality: The criteria to be applied to the developed transition process shall be focused on its effectiveness upon the actual transition of SLAs. Specifics shall include:

- Provides clear responsibilities between mission and institutional SLAs.
- Provides the basis for realistic estimates for SLA cost and schedule impacts.
- Provides clear and realistic roles and responsibilities of government-to-contractor and contractor-to-government interfaces.
- Clarity of phase-in plan to phase-in implementers.
- The extent to which the phase-in process developed by the team is used without modification.
- Provides reduction in civil service involvement.

Output/Deliverables Schedule: A Master Transition Work Plan to include the Functional/Task Level Phase-In Work Package Templates for each Service Level Agreement; and organization chart with government-to-contractor and contractor-to-government interfaces identified; and a sample work package.

Team Process/Meeting Schedule: Joint Team Meetings (NASA/Contractor), Mondays Wednesdays, and Fridays, 10 a.m. to 12 p.m., outside work assignments, with weekly reports to the Program Management Team.

- Define Phase-in Process, changing civil servant/contractor roles, and other items identified in Team Purpose, and record in working Transition Plan Document.
- Apply guidelines in Transition Plan to implementing items defined in Team Purpose (adjust guidelines as necessary or as directed to accommodate peculiarities or specific SLAs.
- Closely coordinate with other teams.
- Charter Subteams as necessary, conduct subteam meetings, and perform out of meeting assignments.

Team Members:

NASA

Bill Kelly (NASA Lead)
Tony Maione
Vicki Oxenham
Emil Kirwin
Paul McCeney
Scott Greatorex

Contractors

Dave Wagner (Contractor Lead)
Joe Konopka
Dennis McGinley
Sarvapalli Kishen
Betsy Tervo
Bob Johns

Valid Through September 30, 1996

Pepper Hartley
Sharon Garrison
Ray Pless
Joe Sparmo

Walter Ligon

Other: This team will not delineate staffing levels. It is our assumption that the individual SLAs and TDs will have staffing and cost information.

Consolidated NMOS Scope of Work Team Charter

Team Purpose: The Consolidated Network and Mission Operations Scope of Work Team is chartered to define and develop the appropriate Service Level Agreements (SLAs), General Support Agreements (GSAs), and a Work Breakdown Structure (WBS) for the Consolidated NMOS contract.

Scope: The scope of this team's effort includes the following contracts currently operated by AlliedSignal and Computer Sciences Corporation:

- Network and Mission Operations Support (NMOS).
- System Engineering and Analysis Support (SEAS).
- Operations and Maintenance of Radar, Telecommunications, Optical and TV Systems and Meteorological Forecasting at GSFC WFF.

Customer: Dick Tagler (Chairman of the Program Management Team)

Criteria for Quality: The criteria to be used in performing trade studies of alternative SLA structures and SLA content are as follows:

- Reduces/reengineers government oversight.
- Incentivizes contractor to provide "best value" price, quality, and schedule while reducing cost by: Eliminating redundant capabilities; performing process reengineering; and providing innovative practices and technology.
- Meets SLA definition:
 1. Provides Service/Product for a price (Target Price and/or Fixed Unit Cost).
 2. Provides SLA Manager with the responsibility and authority to deliver that service at/or below the given price.
 3. Quantitative metrics can be used to determine if that service/product has been delivered for the price.
- Achievable within the Consolidated NMOS Time Period without impact to ongoing activities.
- The structure facilitates full cost accounting for the missions to the maximum extent possible.
- Provides clear responsibilities among all SLAs.
- SLAs are maintainable (do not require constant updates).

Output/Deliverables Schedule: The product of this team will be the Management SLA, Mission and Institutional SLAs, and a consolidated WBS as given in the attached schedule of deliverables.

Team Process/Schedule: The following activities will be accomplished:

- Define SLA structure and identify each individual SLA.
- Incorporate the defined SLAs into a consolidated WBS, identifying through this process the GSAs.
- Provide training to sub-teams for preparing SLAs.
- Charter sub-teams to prepare initial three SLAs: Phase-in; Generic Mission; and Institutional.
- Apply generic to selected missions.
- Monitor and guide development/benchmarking of the SLAs throughout the phase-in period.
- Provide structure of GSAs and monitor GSA development.

It is anticipated that the team(s) will meet at least three times weekly for two hours or as necessary to achieve the goal of the team.

<u>Team Members:</u>	Bill Guion (NASA Lead)	Charles Goorevich (Contractor Lead)
	Bill Macoughtry	Joseph Konopka
	Dennis Giblin	Bruce Emmel
	Jim Rash	Kenneth Griffin
	Bill Watson	Ray Lee
	Tom Butler	Al Nicotra
	Rose Pajerski	Harry Schenk
	J. B. Joyce	Bob Hickman
	Randy Harbaugh	Walter Ligon
	Donna Walls	
	Tony Maione	
	Bobby Flowers	
	Steve Currier	
	Kirt Bush	

Consolidated NMOS Communications Team Charter

Team Purpose: To provide training and orientation for the NASA and contractor personnel involved in the Consolidated NMOS contract.

Scope: The scope of this team's effort includes the following contracts currently operated by AlliedSignal and Computer Sciences Corporation:

- Network and Mission Operations Support (NMOS).
- System Engineering and Analysis Support (SEAS).
- Operations and Maintenance of Radar, Telecommunications, Optical and TV Systems and Meteorological Forecasting at GSFC WFF.

Customers:

- Program Management Team
- NASA and contractor personnel involved in the NMOS, SEAS, and WOPS contract services.

Criteria for Quality:

- Clear, concise set of orientation materials which explains what Consolidated NMOS is, how it affects both NASA and the SEAS and NMOS contractors, and how we can make it work
- Homogenized Attendance at Orientation--orientations attended by cross-section of NASA and contractors
- Use of the Consolidated NMOS Question Form--employees and their managers feel free to ask pertinent questions and the questions indicate the material that was presented was understood
- Use of the E-Mail Accounts--employees and their managers freely use this method of information dissemination
- Training/orientation responds to and disseminates information from the other Consolidated NMOS Teams in a timely and thorough manner
- Material addresses ATSC/CSC/Subs/NASA concerns in a timely and thorough manner
- Attendance at non-mandatory Consolidated NMOS activities is TBD percent

Output/Deliverables Schedule: Team meetings to beginning the week of February 12; output due April 1, 1996. Team deliverables schedule incorporated into the Integrated Consolidated NMOS Team Activity Schedule, due to D. Tagler 3/14/96.

Output:

Orientation/training programs for consolidated contracts, performance-based contracting (includes content, resources, funding, etc.), and SLAs.

Orientation/overview of Consolidated NMOS Plan.

Team Process/Schedule: Team meetings three times per week with weekly updates provided to Program Management Team.

Team Members:

NASA

B. J. Hayden (NASA Lead)

TBD

Contractors

Janis Stengle (Contractor Lead)

Jeff Elliott

Simon Babil

Lena Wood

Additional Issues to be Addressed: Hiring/training requirements based on changing roles and responsibilities as defined by the Operations Transition Team (e.g., certification).

Valid Through September 30, 1996

Appendix B.

SLA/GSA Phase-in Work Package Instructions

Appendix B. SLA/GSA Phase-in Work Package Instructions

The Phase-in Work Package (PWP) is a set of documented activities that must be completed in order to successfully begin performing consolidated work under the NMOS contract. The PWP is compiled by the SLA/GSA Technical Area Manager, reviewed and approved by NMOS management and the SLA/GSA Technical Area Owner, and finally approved by the PMT. It outlines the phase-in approach, describes what the work is, the planning that has been accomplished, what has been or must be transferred to or from NASA, necessary logistical support that has been or must be provided, and the mentoring activities that have occurred or must occur. Progress in completing PWP activities will be reported to the PMT.

The purpose of this document is to describe the items in a PWP. The minimum components of a PWP are:

- A copy of the SLA or GSA to be implemented.
- A copy of the SLA/GSA Authorization Order authorizing phase-in activities.
- A Summary description of the overall SLA/GSA phase-in approach.
- A Project Management Plan for the SLA/GSA.
- A Logistics Support Plan.
- A completed SLA/GSA Phase-in Checklist

The SLA/GSA is developed by the Technical Area Owner and Manager working together.

The SLA/GSA Authorization Order is issued by the NMOS program office when the SLA/GSA is considered to be stable and complete enough for work planning to begin. It will include or reference a mapping of work under the separate contracts that is to be consolidated into the SLA/GSA.

The SLA/GSA Summary gives a brief description of the SLA/GSA and its relationship, if any, to other SLAs/GSAs (e.g., other Mission SLAs). Identify the major component of the work to be performed as either engineering, development, operations, maintenance, or facilities. Describe briefly the overall process for phasing in the consolidated work. If appropriate or helpful, include a summary phase-in schedule for the work. If applicable, describe any considerations from the SLA/GSA Phase-in Checklist that need to be highlighted.

The Project Management Plan (PMP) describes the work to be performed, the management approach to organizing, monitoring, controlling, implementing and reporting the work, the technical approach and issues, the master and detailed work schedules, deliverables and events to be achieved, the risk management plan, and the cost basis of estimate for the SLA/GSA. Detailed instructions are included below outlining the requirements for a complete Project Management Plan (PMP).

In the case of some GSAs, an abbreviated form of plan, called a Project Implementation Plan (PIP), may be prepared to meet the intent of the PMP. In general, this exception will be granted when the scope of the PMP is clearly excessive to document the needs of the GSA. The Consolidated NMOS project control office will approve use of the PIP format.

The Logistics Support Plan (LSP) describes the logistical considerations pertaining to the SLA/GSA. It addresses such topics as facilities, property, personnel, security, and other support requirements for performing the work described in the PMP. It may also include such topics as

Valid Through September 30, 1996

software distribution, document distribution, diagnostic test support, software maintenance facilities, failure and repair data collection, software archive responsibilities, and document maintenance responsibilities. Detailed instructions are included below.

The SLA/GSA Phase-in Checklist lists the activities and areas that must be performed or considered in preparing for consolidated operations.

Project Management Plan

Background

Describe previous years' activity, giving a system overview, or stating the overall purpose and applicability of the plan. Identify applicable documents and a glossary of acronyms or any terms that need to be defined. Refer to the documentation hierarchy, using *ATSC Core Process Handbooks* or *CSC Systems Processes* to guide this effort. Cite documents by publisher or source; document number or other unique identifier (if any); title, version or release designator (if any); and date.

Direct the reader's attention to any significant aspect of the PMP that the manager wants to present at the outset.

Meetings of Understanding

Summarize meetings and conversations held with the customer throughout the planning period. Include the names of meeting/conversation participants and the approximate dates of the communications. Refer to any additional information from the customer, such as electronic mail messages.

Assumptions and Clarifications

List any assumptions or clarifications used to plan the work. Include any aspect of the work that has triggered the need for an amendment or that has been formally identified as a risk. Map the assumptions directly to the work assignment, either by presenting them in the order in which the related topics appear in the assignment or by explicitly numbering each in accordance with the work assignment numbering scheme.

The following are examples of the kind of information that could be included as assumptions and clarifications:

- Access to resources (e.g., hardware, government test facilities) as a requisite to completing work or accomplishing the schedule.
- Clarification of the number of, type of, or schedule for deliverables. Include here any changes in the delivery schedule specified in the work assignment. (Remember that schedule changes may require an amendment to the work assignment.)
- Availability of government-furnished information (GFI) [e.g., interface control documents (ICDs), telemetry and command handbook] as a requisite to completing work or accomplishing schedule.
- Limitations of contractor responsibility (e.g., level of test, training, or transition support).
- Hardware or software purchases not specified in the work assignment.
- Changes in the number of releases or schedules. (Remember that schedule changes may require a SLA/TD amendment if those changes will result in a delivery delay.)
- Degree of contractor responsibility/control when work is being performed with another contractor (e.g., joint GSFC/NMOS testing).

- Use of planning packages or undistributed budget for undefined work.
- Software build sizes and the amount of reuse.

Management Approach

This is an *overview section*, and should not contain detailed discussions of topics covered in later sections.

Define the management approach for ensuring that SLA/GSA commitments are met and discuss the rationale for this approach.

Provide a summary overview of how the work is planned, identify the management tools that will be used (e.g. performance measurement system, software estimating method, software measurement system, progress trend tracking charts), describe how the work will be monitored, and identify the control mechanisms that will be used. Identify the policies and procedures that will apply to the project or refer to an attached list of them.

Project Organization

Provide or refer to a hierarchical chart of the organization. Describe the organization, including the responsibilities and authorities of each organizational element. Identify the reporting structure and its interfaces with subcontractors and supporting organizations. Explain how the organization reports to the customer and relates to the customer organization.

Work Breakdown Structure

Provide or refer to a chart of the work breakdown structure (WBS). Describe the WBS for the entire project life cycle and how the project may be related to other work within a higher SLA or GSA. Refer to the discussion of the WBS description in the "Work Description" section below.

Management Reviews

Discuss the approach for keeping management informed regarding project status. Identify the reports to be prepared and define responsibilities for preparing them and for conducting reviews.

System Engineering Management

Describe the high level approach to systems engineering management. Define systems engineering functions and activities for all phases of the project. Identify standards and procedures that apply (e.g., Procedure 2102, Technical Performance Measurement). If applicable, state that systems engineering activities are documented in a separate plan (refer to *ATSC Core Process Handbooks*, CSC DID Standard 6113 and *CSC Systems Processes*).

Software Management

Describe the high level approach to managing software development, including the software life cycle, the software development methodology, the methods, standards, and procedures for developing/maintaining the software, and the tools to be used. Include software estimation and measurement requirements. Discuss the plan for providing software engineering facilities and support tools. Define the process for making develop/reuse/purchase decisions, and discuss the strategy for integrating these modules into the system. Define management of the builds and releases. Discuss the strategy for maximizing/improving software productivity.

Hardware Management

Describe the high level approach to managing hardware development. Discuss the acquisition, operation, and acceptance of hardware. Provide pointers to hardware documentation as appropriate. Discuss the plan for providing hardware engineering facilities and support tools. Define the process for making develop/reuse/purchase decisions, and discuss the strategy for integrating these items into the system.

Deviations/Waivers

If work will be performed using a methodology other than the *ATSC Core Process Handbooks* or *CSC System Processes*, briefly describe the methodology and the rationale for using it. Complete a waiver request and attach it to the PMP.

Risk Management Overview

Describe the overall activities that the project will undertake to reduce risk. Use *CSC Systems Processes* as the basis for the project's risk management program. Refer to the Risk Management section below.

Subcontract Management

State whether subcontractors will be used, and describe at a high level the work for which subcontractors will be responsible. Describe the approach to subcontract management, and reference NMOS policies and procedures for subcontract management (refer to *ATSC Core Process Handbooks* or *CSC Systems Processes*). Outline the controls to be employed to ensure subcontractor compliance with the stated policies. Attach copies of the relevant Subcontractor Task Orders (STO).

Change and Improvement Management

Identify and describe the high level process for improving and changing defined processes.

Configuration Management

Describe the configuration management approach for the project. Identify who has overall responsibility for CM and refer to the project CM Plan. Identify the baselines to be established and the specific documents and databases that will be used to accomplish configuration management.

Product Assurance

Describe the approach to product assurance activities that ensures that all development products (i.e., hardware, software, documentation, and data) meet system requirements and applicable standards. Describe how product assurance will support the project and refer to the product assurance plan and to other applicable topics that are included in *ATSC Core Process Handbooks* or *CSC Systems Processes*.

Security

Identify the administrative, personnel and technical security requirements. Include a discussion of proprietary data. Describe the approach to addressing security issues. Use *ATSC Core Process Handbooks* or *CSC Systems Processes* as a guide.

Work Description

Discuss or further describe in greater detail the technical work to be performed.

Work Breakdown Structure

Briefly discuss the WBS in terms of the lowest level (cost account level) and map the allocation of work to this level. Identify the work and related cost accounts that are assigned to subcontractors and refer to the relevant Subcontractor Task Orders.

Describe the implementation strategy to be used. Describe the builds and releases to be implemented, and their functionality. Describe the integration of commercial off-the-shelf products with developed products. Identify the tools, workstations, and local area networks that will be used. Define the problem reporting and corrective action process. Identify all life-cycle reviews. Define the scope and hierarchy for testing. State the level of independence of the various test teams. Summarize any critical high-level acceptance testing criteria.

Interface Requirements

Identify any interface requirements, including other products or outcomes from other organizations that are on the critical path of successful performance. Include a description of cooperative efforts with other contractors or between SLAs/GSAs, particularly when work in support of the project will be charged to another organization (e.g., "All manpower associated with acquiring this equipment is allocated in xxyyy") or when multiple organizations will work on solving a common problem (e.g., "This organization will coordinate development/preparation of <some product> with xxyyy").

Technical Constraints

Discuss the technical constraints that are imposed. Estimate the critical computer resources needed. Discuss critical technical decisions and assumptions for successful performance, and the strategy for addressing such issues. Discuss any significant deviations from traditional technical approaches (e.g., object-oriented design) or any new technology (e.g., C++) to be employed.

System Security

Identify the organizational elements responsible for security activities, and describe the responsibilities of each. Briefly describe the requirements for physical security, network security, and computer security disciplines.

Transition to Operations

If a system is to transition to operations, briefly summarize the mission operations concept and how it relates to the transition. Use *ATSC Core Process Handbooks* or *CSC Systems Processes* for guidance. Describe at a high level the system operational modes and basic operations scenarios consistent with the system description. Identify operational contingencies and responses. Define operator interfaces and actions during system operations. Describe how the system will be turned over to the operations team after acceptance. Identify transition issues and phaseover activities. Include installation, acceptance, training, and initial operations activities and responsibilities of development and support organizations. Define the positions and training requirements for all categories of personnel. Define project responsibilities at the operations readiness review. Refer to *ATSC Core Process Handbooks* or *CSC Systems Processes* for guidance. Describe the hardware and software maintenance activities to be performed. Identify the system problem report (SPR) and change request (CR) processes that will be used on the project. If there is a requirement for system operations, identify the approach to operations.

Documentation

Identify the documentation requirements and overall documentation plan. Identify the specific procedures for updating documentation.

Risk Management

Identify and describe each significant risk. For each, describe and quantify its impact on the work if the risk materializes, and the actions that will be taken to mitigate the effects of the risk should it occur. For each risk, indicate whether a separate Risk Management Record has been prepared. If there are no significant risks, clearly state so.

Technical Considerations

Describe any technical issues. This could include such issues as alternative architectures, reuse considerations, new technologies, or other unique and important technical characteristics that need to be highlighted.

Schedule

Refer to an attached master schedule. The master schedule should be a high-level schedule that communicates only key major activities and events. In addition, refer to attached detailed baseline cost account schedules containing work packages, earned value criteria, milestones, and staffing profiles. If applicable, discuss any outstanding schedule issues or specific interdependencies. If appropriate, include a network diagram that shows key interdependencies and/or critical paths.

Government Furnished Equipment/Information

Identify any government-furnished equipment or information (GFE/GFI) that is required to perform the work. If the success of the work is dependent on receiving the GFE/GFI, state that condition clearly, including any dates by which the GFE/GFI must be received without incurring a cost, schedule, or performance impact.

Material Acquisition

For hardware or software acquisitions, state that the cost estimate includes budget for the acquisition of materials and specify the particular, or type of, equipment to be purchased or the "operational system" needed, and specify the purpose of the equipment. Indicate whether this equipment will be delivered to the customer and, if so, when delivery will occur. Discuss the status of the Bill of Materials, if any.

Training and Non-Local Travel

Identify and describe the training requirements for development personnel and system operations personnel. Include training for system users, operators, and support personnel. Identify any non-project sources of training. State that the cost estimate includes budget for training, and provide details on the number of people, type of training, and schedule, if possible. For non-local travel, state that the cost estimate includes budget for non-local travel and provide details on the destination, frequency, number of travelers, and schedule, if possible.

Deliverables

List all deliverables, including Government-furnished information and equipment, and map them to the WBS. This list of deliverables should also appear on an Event List associated with the schedule, basis of estimate, and documentation deliveries planned for the project.

Metrics

List the metrics that will be collected in conjunction with work performance and describe baseline determination (if applicable), the frequency of collection, the method of collection, and the reporting vehicle.

Refer to the criteria for successful performance in the work assignment, and discuss in detail the metrics that will be collected to satisfy those criteria. Discuss any improvement initiatives that are planned.

Cost

Refer to the enclosed cost estimate. Describe or refer to the basis of estimate for the SLA/GSA, i.e., the staffing profile and skill mix required, special expertise that needs to be obtained, significant non-local travel requirements, material, hardware, or software to be procured. Discuss any other cost issues, particularly work that has been assigned but not scheduled or estimated, undistributed budget, and management reserve. However, do not discuss exact staffing or cost data in this section; for exact information, refer the reader to the cost estimate.

Unresolved Issues

This section must either state that there are no unresolved issues or identify each issue and the proposed process by which the issue will be resolved.

Logistics Support Plan

Support Functions

Identify the personnel, facilities, materials, and property including test equipment, government furnished equipment, and contractor furnished equipment needed to satisfy all the requirements of the SLA/GSA.

Staffing Plans

Identify unique educational, experience, certification, and security clearance requirements for the personnel assigned to this SLA/GSA. Develop a plan to upgrade skill levels and activate/request security clearances as required. Ensure all personnel have been properly badged to enter assigned buildings.

Personnel Orientation

Identify orientation classes required for personnel supporting this SLA/GSA. Classes include such subjects as consolidated NMOS overview, management training in contract policies, additional responsibilities that SLA team members must assume. Define the terms "oversight" and "insight" and explain what they mean in the "performance-based" contract environment. Indicate estimated number of people to be trained and when training must be completed. For training that is needed but not available through NMOS training organization, identify how training will be provided; e.g., developed, procured.

Facilities

Identify the office, laboratory and storage space needed to perform the SLA/GSA, including any special requirements such as facility security clearance, special temperature and humidity control, unique power needs, etc.

Personnel Relocation

Indicate what, if any, personnel relocation is required indicating from/to, reason for move and date required.

Property

Identify and inventory all the property assigned to the SLA/GSA. This property includes all GFE, CFE, hardware and software for which the SLA/GSA is accountable. Ensure that all property accountability has been transferred prior to completing phase-in.

Reporting

Identify or describe the reports related to logistics that will be delivered to the customer, including the type of report, contents (can reference contract standard reports), frequency, responsibility, where delivered and when reporting will start. If any reports are being phased out, indicate which ones and when.

Identify or describe the same information for internal reports for this SLA/GSA.

Valid Through September 30, 1996

Appendix C.
SLA/GSA Phase-in Checklist
for
Technical Area Owners

Appendix C. SLA/GSA Phase-in Checklist for Technical Area Owners

SLA/GSA Title: _____
SLA/GSA Number: _____
SLA/GSA Owner: _____
SLA/GSA Manager: _____

Funding Authorization

506 authority availability (date): _____
UPN(s) (org code(s) + 7 digit number(s)): _____
NOA availability (\$): _____
Carry-over availability (\$): _____
Previous funding provided (\$): _____
Incremental funding level provided (\$): _____
Reimbursable funding provided (\$): _____
Run-out cost (\$): _____
Cost to completion (\$): _____

Funding Plan

Funds committed (\$ and date): _____
Funds obligated (\$ and date): _____
Funds costed (\$ and date): _____

Work Plan

Work initiative (date): _____
Work review plan (scope and dates): _____
Financial reporting plan (scope and dates): _____
Work completion (date): _____

4/11/96

Valid Through September 30, 1996

SLA/GSA Phase-in Checklist
for
Technical Area Owners and SLA/GSA Managers

SLA/GSA Title:

SLA/GSA Number:

Item	Owner		Manager		Comment
	Yes	No	Yes	No	
Technical Area Owner transition requirements complete					
SLA/GSA Authorization Order complete					
SLA/GSA cost center/task list complete					
SLA/GSA organization & Manager identified					
SLA/GSA Implementation Team selected					
WBS/Cost Reporting Structure reviewed					
SLA/GSA Project Management Plan					
Project Organization					
Work Breakdown Structure					
Deviations/Waivers					
Risk Management					
Master Schedule					
Detailed Cost Account Schedules					
GFE/GFI					
Material Acquisition					
Non-Local Travel and Training					
List of Deliverables					
Basis of Estimate					
Subcontract Management					
Change Management					
Configuration Management					
Product Assurance					
Security					
Safety					
Unresolved Issues					
Staffing					
Critical staffing positions filled					
Staffing complete					
Personnel relocation complete					
Organization realignment complete					
Personnel security clearance complete					
Badging complete					
Personnel orientation complete					
Personnel training/certification complete					
Interfaces defined as operational					

Valid Through September 30, 1996

Item	Owner		Manager		Comment
	Yes	No	Yes	No	
Facilities					
Physical space available and suitable					
Hazardous and toxic material handling, use, and storage plan approved					
Employee physical security plan approved					
GFE Documentation					
Up-to-date					
Complete					
Classified documentation requirements provided					
Phase-in Readiness Review					
Phase-in Operational Readiness Review					
Program Management Team Approval					

Technical Area Manager

Technical Area Owner

Program Management Team

4/12/96

Glossary

Baseline Budget	The sum of current target cost, undistributed budget, and management reserve.
Communications	Provides interfaces between all network elements. Services include high-speed data circuits, audio circuits, and wideband circuits, network management, and maintenance and operations of the GSFC Telecommunications Network.
Configuration Management	Identifies and documents functional and physical characteristics of a configuration item, controls changes to those characteristics, and records and reports change processing and implementation status.
Cost/Schedule Control	Tracking and reporting the staffing, costs, schedules, and earned value (when applicable) associated with each cost account contained in the SLA/GSA Project WBS.
Current Target Cost	The target price as changed through priced changes to the SLA/GSA.
Development	Perform functional and performance analysis, define data base requirements, allocate requirements to specific components of the design, perform detailed hardware and software design, fabricate, procure, and unit test hardware systems/subsystems, code and unit test all software components, and integrate and test hardware and software elements.
Documentation	Includes documentation for planning, implementation, testing and operations of all facilities and services provided by Consolidated NMOS. Also includes documentation control, support services such as the technical library and distribution, technical writing and editing, and automated documentation.

Earned Value	The value, in dollars, of scheduled work that has been completed. Calculated for cost accounts that have work schedules that can be assessed as to schedule attainment according to predetermined completion criteria. For cost accounts whose schedule attainment cannot be assessed, the earned value is automatically calculated to be equal to the baselined spending profile.
Estimate at Completion (EAC)	The contractor's estimated total cost upon completion of the work assigned to the SLA/GSA.
Facilities Management	Provides maintenance, upgrades, and operations of the physical buildings consisting primarily of water and waste systems, power generation/distribution, heating, ventilation, air conditioning (HVAC), and utilities.
Financial and Administration	Allocation and control of resources including funding, personnel, logistics, procurements, subcontract management, property management, security, health, and safety. Manage business activities including time keeping, accounting, invoice processing, and accounts payable.
Flight Operations	Spacecraft control and performance analysis including operations planning, monitoring and analyzing spacecraft data to determine status, and taking corrective action to ensure the health and welfare of the spacecraft.
Ground Network Operations	Tracking and Data support provided by the Merritt Island, Ponce De Leon, and Bermuda ground stations. This also includes the Network Control Center support provided to the ground segment.
Ground Operations	Trajectory, data processing, and computer facilities providing user specific support.
GSFC	Goddard Space Flight Center (Greenbelt, MD)
Hardware	All equipment that is purchased, leased, or built and delivered to satisfy the system requirements.
Initial Target Cost	The target price of the SLA/GSA negotiated between the government and the contractor upon phase-in, less undistributed budget or management reserve.
Logistics	Includes procurement, receipt, storage, issuance, shipment, and control of funded initial and resupply of spares, components, minor plant equipment, hand tools, test equipment, operating materials, and magnetic storage media products.

Maintenance	All preventive maintenance for both hardware and software, corrective maintenance to resolve detected anomalies, and minor enhancements to improve the operations, reliability, maintainability, and availability of system capabilities.
Mission Planning	Includes Mission concept and project definition activities which are performed during Phase A and Phase B, requirements definition, mission specifications and constraints, and operations and systems concepts.
MTPE	Mission to Planet Earth
NASA HQ	National Aeronautics and Space Administration Headquarters (Washington, DC)
Operational Readiness	Ensures that all facilities and services maintain a state of readiness for mission launches and sustained support throughout the mission lifetime. This includes assuring the performance standards of: a) personnel training and certification; b) software status; c) quality assurance auditing; d) configuration management; and e) property control.
Operations	Includes unique mission operations and routine operations including simulations and testing activities.
Optical and TV Operations	Operations and maintenance of optical and video systems, processing and printing of film products and video studio editing.
Performance Accounting	The accumulation, processing, and presentation of Consolidated NMOS service performance metrics to provide NASA insight to the Consolidated NMOS contractor's performance.
Performance Evaluation	The evaluation of the service level metrics provided by the contractor performed by NASA of the contractor's performance.

Program Integration	The integration and operational testing of all system components after final installation. Also includes the transition and training of the O&M team, system acceptance testing of the operating procedures, maintenance procedures, and all hardware and software, and all system documentation by the O&M team.
Program Management	Establish an organization responsive to the Consolidated NMOS SOW. Develop the management system, controls, functions, policies, procedures, performance metrics and documentation required to provide the NASA insight.
Project Work Breakdown Structure	The hierarchical relationship between all SLAs and GSAs under the Consolidated NMOS contract and the relationship of cost accounts within each SLA and GSA.
Property Management	Includes the management and accountability procedures to establish and maintain records of assigned property, schedule inventories, prepare disposition forms, excess unused property, and ensure the operational integrity of the equipment.
Radar Operations	Operations and maintenance of various fixed and mobile radar systems, advanced research radar complex/airborne and Atmospheric Science Research Facility.
Requirements Analysis	Evaluates mission objectives, derives the mission operations concepts, establishes overall test requirements, and develops overall system requirements.
Research and Development	Identify and develop new system concepts, technologies, tools, and standards for RF.
RF Compatibility Testing	Testing performance to ensure RF compatibility between the spacecraft and the ground support systems.
Safety, Security, and Quality Assurance	Includes developing and administering safety, security and quality assurance programs including plans, procedures, training, audits, and corrective action plans for Consolidated NMOS functional areas.
Security	The administration, inspection, and corrective action of any discrepancies of physical, personnel, information, computer, and communications security.

Software	All software that is purchased, leased or developed and delivered to satisfy the system requirements.
Space Network Operations	Tracking and Data support provided by the TDRS, White Sands Complex, and Network Control Center.
Strategic Planning	Analyze system and operational capabilities with respect to new or anticipated user requirements in order to identify needed system changes or new systems.
Subcontract Management	Provide the management and oversight to ensure the proper resources are committed to the task, the products are delivered on schedule, there is timely and objective assessment of the task performance, and prompt and effective corrective actions are initiated as required.
Sustaining Engineering	Supports ongoing performance analysis and design trade-off studies, defines systems interfaces, and plans for system transition to operations.
Systems Engineering	The management and technical direction of a totally integrated engineering effort for the system. Includes the system requirements analysis and system design, sustaining engineering, and the traceability of all requirements throughout the development portion of the system life cycle.
Telecommunications	Operations and maintenance of Wallops Flight Facility mobile telemetry, fixed telemetry and orbital tracking stations, various communications and timing equipment, and meteorological equipment and related activities.
Testing	The integration of all subsystems as they are completed, executing system test procedures and security testing as required, develop "as built system description" including final versions of detailed design documents.
Tracking Data Evaluation	Involves the validation of tracking data measurements from individual passes or events and the calibration of tracker performance based on these measurements.
Training	The design and development of training course materials and all the other services and devices used to provide support personnel with the skills and knowledge to operate and maintain support systems.
Trajectory Analysis	Performance of mission analysis for trajectory determination in support of flight projects including orbit adjustment, computations and maneuvers,

Valid Through September 30, 1996

optimum mission profile, launch window, and orbit evolution.

Weather/Forecasting Operations

Operations of weather data collection systems and weather forecast briefings.